

EXAMINER INTERVIEW

Applicants thank the Examiner for conducting an interview on June 7, 2010 regarding proposed amendments to the independent claims. Although no agreement was reached during the interview, the amendments to the claims made herein reflect the proposed amendments that were discussed during the interview.

REMARKS

This Amendment responds to the Office Action mailed January 5, 2010. Claims 1, 3-12, 14, 15, 17-20, 28-30, and 33-34 are currently pending. Independent claim 1 has been amended to recite that each of the claimed building panels is “formed from sheet metal and configured to mate with adjacent building panels so as to form a load-bearing panel of a self-supporting building structure.” Similarly, independent claim 15 has been amended to recite that each of the claimed building panels is “formed from sheet material and configured to mate with adjacent building panels so as to form a load-bearing wall of a self-supporting building structure.” Support for these amendments can be found, for example, at ¶ [0001] - [0003], [0009] – [0011], [0038], and FIGs. 6 – 8 of the published application. Claim 19 has been amended to correct a clerical error. No new matter has been added by way of these amendments. Reconsideration and allowance is respectfully requested.

Art Rejections

Claims 1, 3, 31, and 33 have been rejected under 35 U.S.C. § 103(a) as allegedly obvious over U.S. Patent No. 4,796,393 (“Toti”) in view of U.S. Patent No. 4,505,084 (“Knudson”), and further in view of U.S. Patent No. 4,358,916 (“Lacasse”). Independent claim 1 has been amended to distinguish over these references and Applicants respectfully traverse.

Independent claim 1 as amended recites that the claimed building panel is “configured to mate with adjacent building panels so as to form a load-bearing wall of a self-supporting building structure.” In contrast, Toti fails to teach building panels capable of being used as load-bearing walls of a building, and therefore cannot be modified to render claim 1 obvious. Specifically, Toti teaches panels for forming a decorative awning that are incapable of supporting any significant load. *See Toti*, 1:6-9.

Indeed, the design constraints involved with supporting a building are significantly more stringent than those involved in producing a decorative awning. Building panels used

as structural members in buildings are subject to large bending moments due to gravitational forces, and must withstand wind shear, snow-loading, and other stresses. For instance, the current application describes that exemplary building panels are “formed from a single roll of ASTM standard A-653 steel sheet metal having a thickness ranging from about 24 gauge to 16 gauge.” Application, ¶ [0038]. Other materials can be used only if they meet “the desired engineering requirements and provide[] the necessary structural integrity. *Id.*

In contrast, Toti is directed to aesthetic design considerations. For example, Toti states that “[i]t is an object of this invention to provide an improved construction for a *decorative* awning or facia structure *on a building*.” Toti, 1:47-49 (emphasis added). Toti states that other objects are to provide “selective customization of color” and “a wide variety of pleasing curved configurations.” Toti, 1:50-58.

Toti teaches an awning supported on a building, and does not teach panels that can support a building. For example, Toti describes the metal used to form the awning as preferably thin gauge aluminum having “a thickness in the range of 0.018 inch – 0.040 inch.” Toti, 8:20-21. Toti further states that bracing is preferable in larger awnings because “the panel construction and assembly is still insufficient to avoid rattling and other problems.” Toti, 12:62-65.

In light of these fundamental differences, Toti cannot be modified to render claim 1 obvious for at least two reasons.

First, a hypothetical modification of a reference cannot change the principle of operation of the reference. MPEP § 2143.01(IV). As discussed above, there are significant differences between panels used for manufacturing decorative awnings and building panels used to form load-bearing walls. The hypothetical modification of the Toti awning panels to form load-bearing walls of a self-supporting building structure would therefore require a substantial reconstruction and redesign of the elements shown in Toti – and thus would be improper under MPEP § 2143.01(IV). Since the Toti awning panels must be *supported on a building* by bracing, Toti, 12:62-65, modifying the panels to instead become load-bearing walls of a self-supporting building structure would completely reverse the basic principles taught by Toti.

Second, a hypothetical modification of a reference cannot render prior art unsatisfactory for its purpose. MPEP § 2143.01(V). The hypothetical modification of the Toti awning panels to form load-bearing walls of a building structure would be contrary to the purpose of Toti because, to support a building, the design constraints required for load-

bearing structures would have to override the aesthetic concerns that are the primary purpose of Toti.

Based on the foregoing, the obviousness rejections over Toti are mooted by the amendment of claim 1 and should be withdrawn. Claims 3 and 33 are also allowable at least by virtue of dependency.

Claims 1 and 3-12 have been rejected under 35 U.S.C. § 103(a) as allegedly obvious over Knudson in view of Toti and Lacasse. Claims 14-15, 17-20, 28-30, 32, and 34 have been rejected under 35 U.S.C. § 103(a) as allegedly obvious over Knudson in view of Toti, Lacasse, U.S. Patent No. 4,579,785 ("Karoubas"), and U.S. Patent No. 5,020,295 ("Haines"). Independent claims 1 and 15 are readily patentable over these references and Applicants respectfully traverse.

Claims 1 and 15 recite that the curved central portion of the building panel has a *curved shape in cross section* perpendicular to a longitudinal direction along a length of the building panel. In rejecting claim 1, the Office alleges that the building panel shown in Figure 13 of Knudson discloses this feature, Office Action at p. 3. This is incorrect. The building panel in Figure 13 of Knudson does not include a central portion with a *curved shape* in cross section.

Further, claims 1 and 15 recite straight side wall portions that extend tangentially in cross section from the concave-shaped curved central portion. The Office alleges that Figure 13 of Knudson discloses this feature, Office Action at p. 4, but this is also incorrect. Knudson does not show any side walls extending *tangentially* from a *curved central portion*.

Figure 9 of the present application and Figures 3 and 13 of Knudson are reproduced below to illustrate differences between an exemplary panel in accordance with claim 1 and the building panel of Knudson.

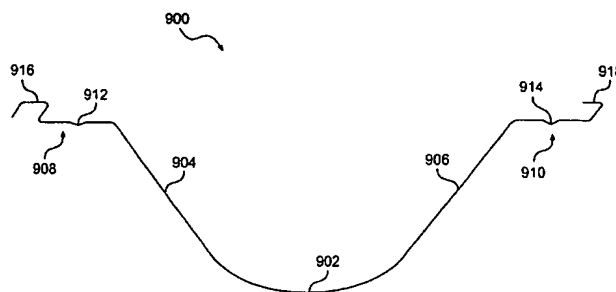


FIG. 9

**Fig. 9 of Present Application Showing Exemplary Panel in Cross Section
 (Longitudinal Direction is Out of Plane of Paper)**

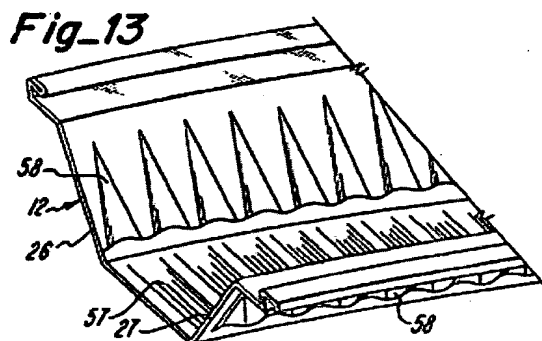
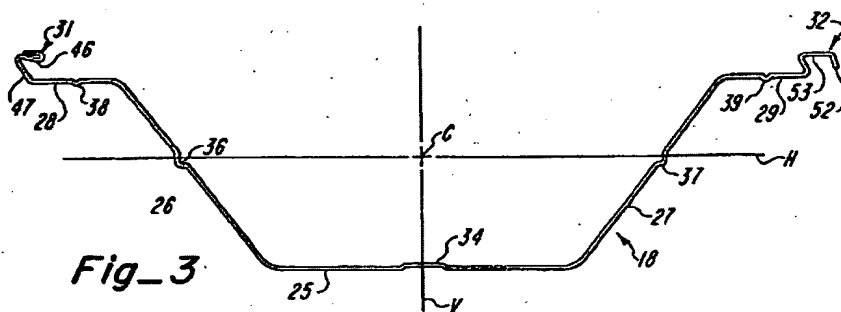


Fig. 13 of Knudson (US 4,505,084) Showing Panel in Perspective View



**Fig. 3 of Knudson (US 4,505,084) Showing Panel in Cross Section
 (Longitudinal Direction is Out of Plane of Paper)**

As can be seen, Figure 9 of the present application illustrates a non-limiting example wherein side wall portions 904 and 906 comprise straight portions that extend tangentially in cross section from the concaved shaped curved central portion 902.

In contrast, the panel shown in Figure 13 of Knudson (also shown in cross section in Figure 3 of Knudson) comprises a straight central portion 25 that is not curved *in cross section* perpendicular to a longitudinal direction along a length of the building pane. And the sidewall portions 26 and 27 of Figures 3 and 13 of Knudson do not extend *tangentially* in cross section from a concave-shaped curved central portion. Accordingly, Knudson fails to disclose all of the features of claim 1. Since the Office has presented no specific modifications to Knudson to address these deficiencies, nor any rationale for making any modifications, the Examiner has failed to present a prima facie case of obviousness for claims 1 and 15.

Moreover, Lacasse, Toti, Karoubas, and Haines fail to remedy the deficiencies of Knudson.

Referring first to Lacasse, Figures 9 and 10 (shown below) illustrate that the panel of Lacasse does not have a curved central portion with *transverse* corrugations therein, as required by independent claims 1 and 15. As shown in Figure 9, Lacasse clearly discloses only longitudinal corrugations extending along the length of Lacasse's panel. The longitudinal direction of Lacasse's panel is out of the plane of the paper, and the cross sectional direction of Lacasse's panel is in the plane of the paper. This is confirmed by the specification of Lacasse, which explicitly refers to Figure 10 (which shows the shape of the Figure 9 panel in the plane of the paper) as "a transverse cross-section." See Lacasse, 6:16-17. Thus Lacasse fails to remedy the deficiencies of Knudson.

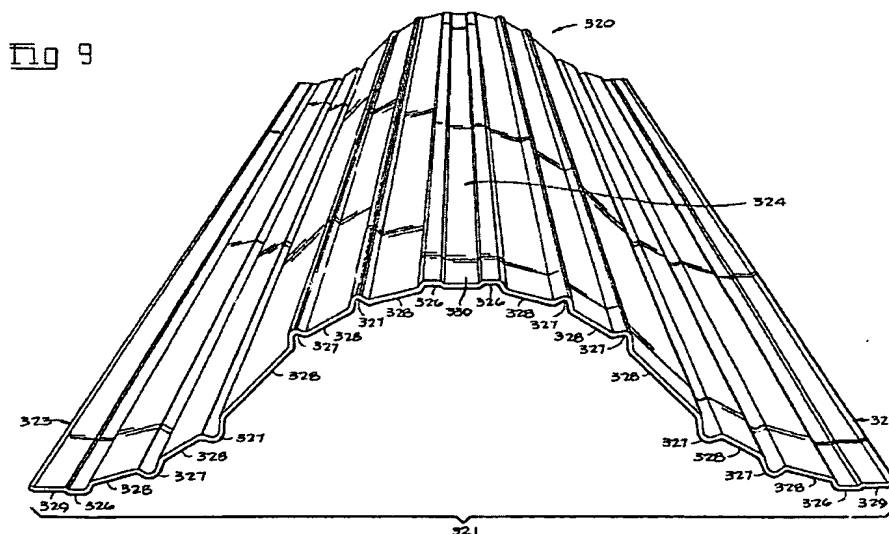


Fig. 9 of Lacasse
(Longitudinal Direction is Out of Plane of Paper)

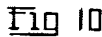


Fig. 10 of Lacasse

(Longitudinal Direction is Out of Plane of Paper)

Referring next to Toti, the awning panels of Toti cannot be combined with Knudson to form load-bearing walls of a self-supporting building structure for the reasons discussed above. In particular, modifying the awning panels of Toti to form load-bearing walls of a self-supporting building structure would contravene the basic principles of Toti and override the aesthetic concerns that are the primary purpose of Toti.

The Office relies upon Karoubas and Haines for their teachings of transverse corrugations and longitudinally curved building panels, respectively. Office Action p. 6-7. Karoubas and Haines are not relied upon – nor could they be relied upon – to cure the deficiencies of Knudson discussed above.

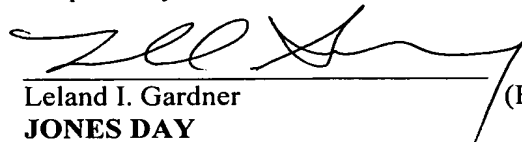
Based on the foregoing, Knudson in combination with Lacasse, Toti, Karoubas, and Haines fails to render claims 1 and 15 obvious. Withdrawal of the rejections and allowance of independent claims 1 and 15 are respectfully requested for at least these reasons. Claims 3-12, 14, 17-20, 28-30, 32 and 34 are allowable at least by virtue of dependency.

Conclusion

In light of the above amendments and remarks, reconsideration and allowance of this application are respectfully requested. However, should the Examiner believe that this application is not in condition for allowance, the Examiner is respectfully requested to contact the undersigned at the number below before issuing a further action to discuss any issues that may remain.

Date: June 7, 2010

Respectfully submitted,



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